

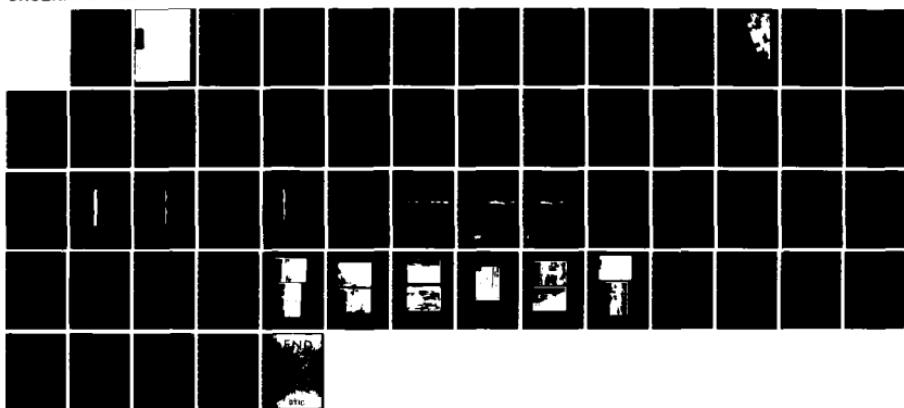
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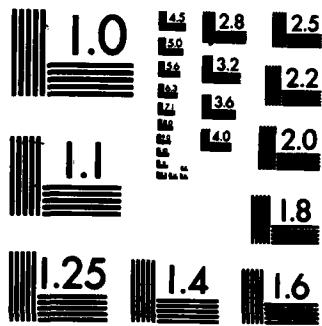
ARCHAEOLOGICAL TEST AND DATA RECOVERY PROGRAM AT
TELEGRAPH CANYON CHULA VISTA CALIFORNIA(U) WESTEC
SERVICES INC SAN DIEGO CA W T ECKHARDT ET AL. SEP 78
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ARCHAEOLOGICAL TEST AND DATA
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TELEGRAPH CANYON, CHULA VISTA,
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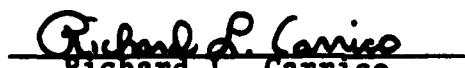
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September 1978

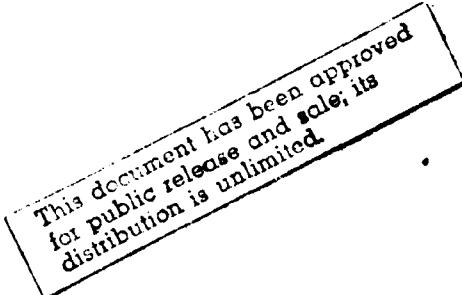
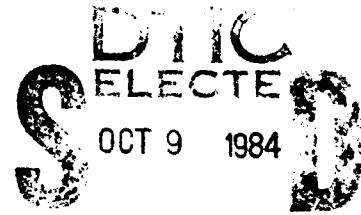


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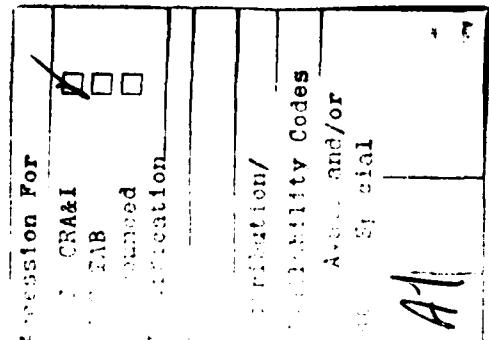
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ARCHAEOLOGICAL TEST AND DATA RECOVERY PROGRAM AT
TELEGRAPH CANYON, CHULA VISTA, CALIFORNIA

1.0 PREFACE

In 1975, the Department of the Army, Corps of Engineers directed that a cultural resource assessment of portions of Telegraph Canyon Creek be made in conjunction with a proposed flood control project scheduled for that drainage. Under contract with the Corps of Engineers, San Diego State University Foundation prepared an environmental impact report detailing results of an intensive literature search and surface reconnaissance of the project area (Leach 1975a). Although the results of the surface survey were negative in that no historic or prehistoric sites were identified (Leach 1975a:19), ethnographic evidence suggested that much of the region surrounding the creekbed would have had high resource value to early native populations in the at least recent prehistoric past (Leach 1975a:4-7).

The possibility of an unsuspected, buried archaeological site could not be entirely discounted (Leach 1975a:25-27), and the Corps of Engineers determined to investigate further. At the request of the Department of the Army, Corps of Engineers, WESTEC Services, Inc. contracted to provide a limited-control, test trench investigation of properties adjacent to Telegraph Canyon Creek from the mouth of the canyon in San Diego Bay to 1,800 feet inland.

Results of the subsurface testing were negative. No cultural deposits of either the historic or prehistoric past were encountered,

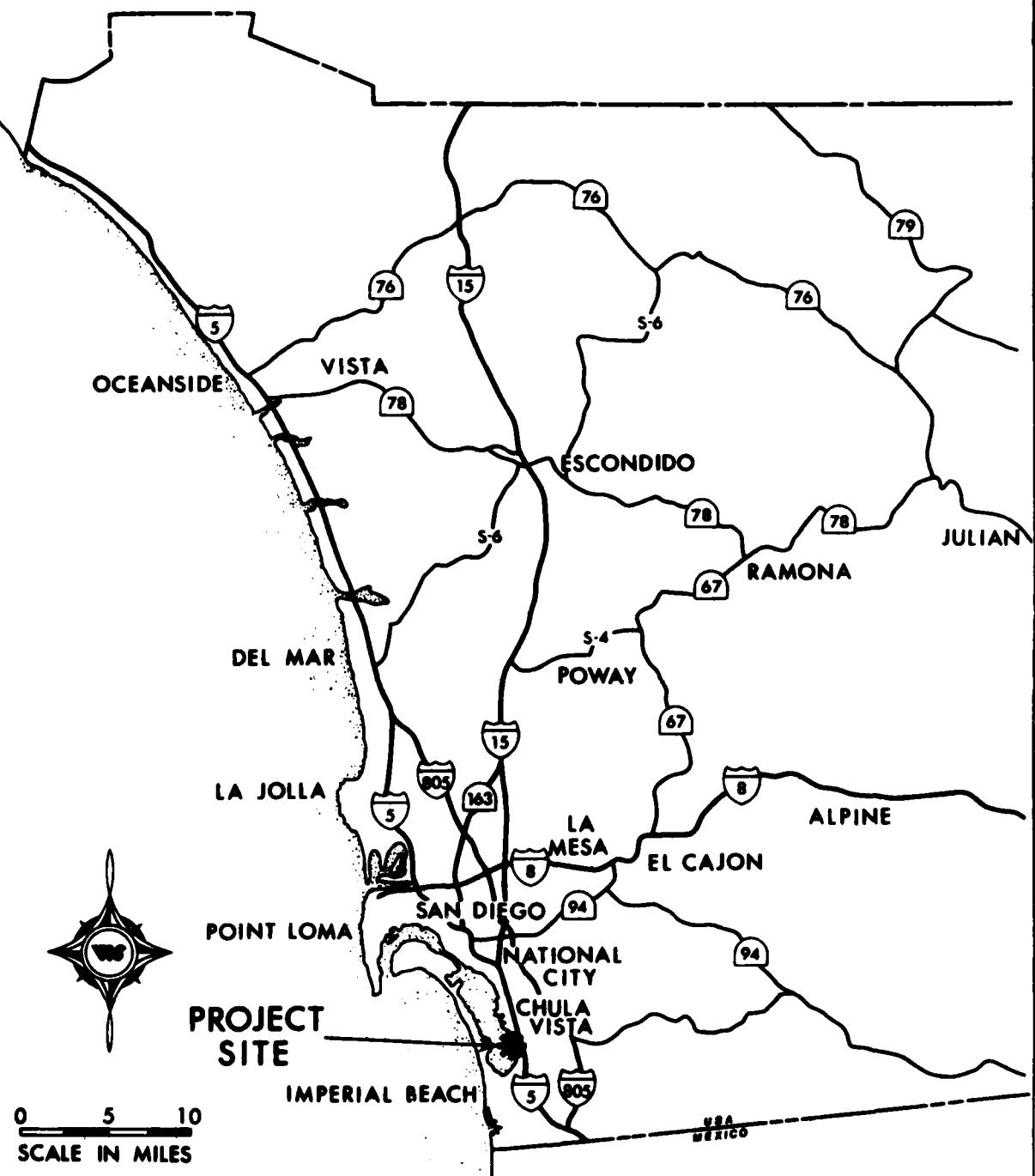
although some historic debris (i.e. metal bolts, rusting cable, and pipelines) were noted. Material information with regard to this testing and subsequent analysis are provided in Sections 5.0 and 6.0 of this report.

2.0 PROJECT SETTING

2.1 INTRODUCTION

>A series of four mechanically dug trenches were excavated and analyzed with regard to subsurface cultural content along the channeled creekbed at the mouth of Telegraph Canyon in Chula Vista, California. The first phase of testing was conducted on September 7 and 8, 1978. Analysis of the test trenches was concluded and the trenches refilled on September 14, 1978. Both field and laboratory aspects of this investigation were supervised by William T. Eckhardt, WESTEC Services' project archaeologist. Assisting with the field and laboratory exercise were Randy Franklin, Brian Hunter, Tracy Selvaduvai, and Kre Easland, archaeological aides. Approximately 64 work hours were expended during both field and laboratory tasks of this archaeological test.

The proposed Telegraph Canyon flood control project is located in southwestern San Diego County, approximately 152 meters (500 feet) west of the intersection of L Street and Interstate 5, in the City of Chula Vista, California (Figure 1). The subject property is situated east of the tidal flat along the eastern shore of San Diego Bay, west of Bay Boulevard, and immediately north of San Diego Gas & Electric Company's South Bay Generating Plant. As depicted on the Imperial Beach U.S.G.S. 7.5 minute quadrangle, the



PROJECT SITE IN RELATION TO WESTERN SAN DIEGO COUNTY.

FIGURE

1

project is located in an unsectioned portion of the Rancho de la Nacion land grant, Township 18 South, Range 2 West (Figure 2).

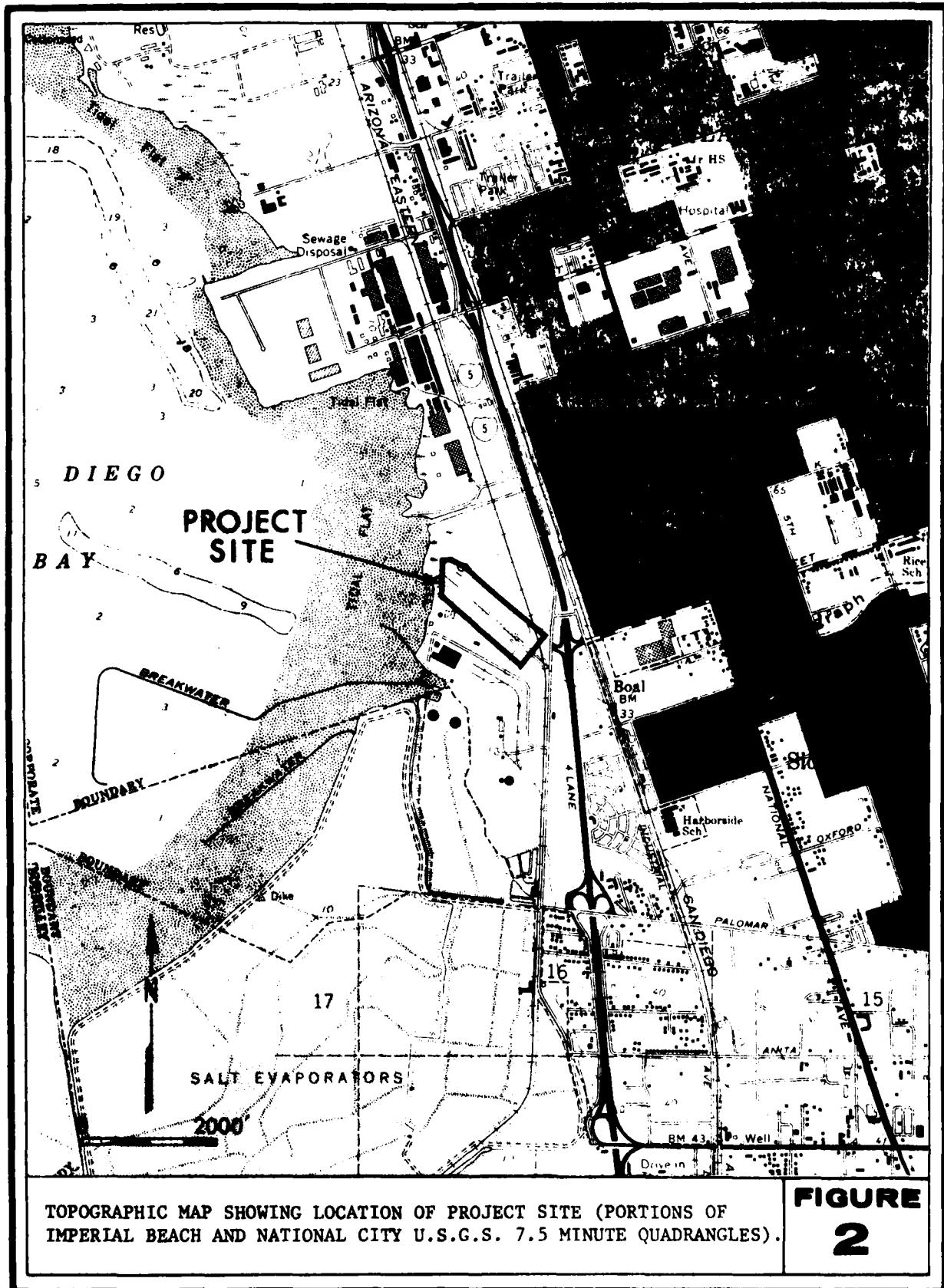
2.2 REGIONAL POTENTIAL

The physical setting in the region of Telegraph Canyon Creek (prior to historic times) would have been highly conducive to the exploitative processes of early native American peoples. This point was clearly presented in the previous impact survey report prepared for the proposed flood control project (Leach 1975a:2-7). Briefly, the region's potential for cultural resources is discussed below.

Urbanization in the areas surrounding Telegraph Canyon Creek has been on-going for at least sixty years (Leach 1975a:16), and is sure to have covered over numerous prehistoric sites which may have been situated along the low-lying terraces overlooking San Diego Bay within the specific area of current study (some 1,800 feet of channeled creekbed between Interstate 5 and San Diego Bay) there is substantial evidence that the ground surface has been constructed by filling in natural salt marsh tidelands (Leach 1975a:19-20).

The creek itself cuts through sediments and marine terraces of Pleistocene and pre-Quaternary age, but may never have been more than an intermittent stream. In contrast, the broad channels of the Sweetwater and Otay Rivers suggest a much more reliable source of fresh water for local aboriginal inhabitants.

Lithic resources which could have been used in stone tool manufacture are somewhat common within the study area, found in the scattered cobble lenses (providing suitable material for milling stones and other cobble tools) throughout the geologic formations discussed



above. Additionally, dikes and veins of quartz and metavolcanic rock are to be found well within the probable land-use territory of the peoples who inhabited the area.

The biological setting for Telegraph Canyon was previously described in detail by Leach (1975a:4-7), and may be summarized as an area rich in exploitable resources. Biotic communities include Coastal Sage Scrub, Riparian, and Coastal Salt Marsh. Potential food resources in the region included four types of animal populations: land animals, birds, mollusks, and fish.

In summary, the entire region could have served as a vast resource area that was probably exploited by native Americans on a regular basis, depending on available foodstuffs, lithic resources, and fresh water supply. An exploitation pattern such as this could result in archaeological sites indicative of semi-permanent maintenance operations (i.e. village), temporary camping, food processing, and seasonal occupation.

3.0 BACKGROUND DATA

The S^r Diego Bay region has not received the quantity nor level of archaeological investigation afforded areas such as coastal northern San Diego County (see Koloseike 1968:371-382; 1969: 143-162; Kaldenberg and May 1975:3-6; Kaldenberg and Ezell 1974; Moriarty *et al.* 1959:185-216; Carrico 1976b:1-158; Shumway *et al.* 1961:37-72; Wallace 1960:277-366; Warren 1961:246-291; Warren and Pavesic 1963:407-438; Warren 1964), or the Cuyamaca Mountain area (True 1966, 1970). Although several small-scale environmental impact surveys (Bull 1973; Leach 1975a; Carrico 1976) and two limited

test excavations (Leach 1975b; Bull 1977) have been conducted in the outlying regions of the Telegraph Canyon project area, there have been no major excavations or large-scale surveys oriented toward the testing of carefully researched hypotheses regarding the patterning of prehistoric native populations.

Data and information synthesized into this brief overview are the result of an evaluation of records at San Diego State University and the Museum of Man. Additional information was obtained through a literature search of pertinent archaeological and historical documents, including: *National Register of Historic Places*, *California Landmarks* and other local directories; communication with other archaeologists; analysis of environmental impact reports conducted within the study area, and examination of other primary sources. A more in-depth discussion of previous land use in the project area can be found in the previous environmental impact report prepared in conjunction with the proposed flood control project (Leach 1975a:8-16).

3.1 CULTURAL HISTORY

In the prehistoric past, the area now comprising San Diego County was densely occupied by native American peoples including at least three major cultures. From roughly 12,000 to 8,000 years ago, the San Dieguito people were the sole inhabitants of this region. Beginning about 8,000 years ago and extending to about 3,000 years ago, the La Jollan-Pauma culture was in existence, with the Pauma aspect being present in the inland regions. Commencing

about 2,500 years ago and extending into the Spanish period, the Kumeyaay (Diegueño) lived and hunted in the area. A broad overview of the three major cultural patterns is provided below.

The following cultural history is a means of outlining and briefly describing the known prehistoric cultural traditions. A primary goal of a cultural history is to provide a diachronic or developmental approach to past lifeways, settlement patterns and cultural processes.

Lacking a synthesis of valid, regionally specific data, we are forced to fall back on a geographically generalized accepted cultural history which is, at best, ill-defined and probably outmoded. As perceived by recent scholars, at least three major cultural patterns have operated in San Diego County (Table 1). There is also the possibility that a much older "Early Man" period may have existed in North America, if not San Diego County.

Recent research and experimentation with amino-acid dating (Bada 1974) has given new life to a decades-old assertion (Carter 1957) that humans were in the New World, and specifically along Mission Valley and the San Diego River, over 40,000 years ago. Although such a possibility exists, and continuing research seems to point in that direction, many scholars are unwilling to categorically state that humans occupied the New World before approximately 30,000 years ago. Continued research in the Arctic region and within our own area should help in resolving the date of initial New World occupation.

Table 1

CHRONOLOGICAL MODEL FOR SAN DIEGO COUNTY PREHISTORY AND HISTORY

<u>CLIMATE</u>	<u>TIME</u>	<u>CULTURAL SETTING</u>	<u>STAGE</u>
<u>Mediterranean</u>			
Moderately warm; arid and semi-arid	1876 A.D.	Reservation Period	
	1850 A.D.	Anglo-European Era	
	1830 A.D.	Mexican Era	
1769 A.D.	Hispanic Era.....		Historic
1542 A.D.	Spanish Era.....		Protohistoric
1000 A.D.	Late Prehistoric Cultures.....		Late Milling
3,000 B.P.	La Jolla Complex termination		
<u>Altithermal</u>4,000 B.P.			
	6,000 B.P.	Los Compadres (W-578) occupied	
Arid, warmer than present	7,500 B.P.	La Jolla Complex.....	Early Milling
<u>Anathermal</u>8,000 B.P.			
		Harris Site (SDi-149) occupied	
Climate like present but growing warm, humid and subhumid	9,500 B.P.	San Dieguito Complex.....	Paleo-Indian
<u>End of Glaciations</u>10,000 B.P.			
	21,000 B.P.	Yuha Man.....	Early Man
	48,000 B.P.	Del Mar Man.....	Early Man

3.1.1 San Dieguito

The oldest well-documented inhabitants of the region were apparently the Paleo-Indian San Dieguito people. Typified as nomadic large-game hunters, these people occupied the mesas, mountains and deserts of San Diego County roughly between 21,000 and 8,000 years ago (Warren 1961:252-253; Rogers 1966:140-148; Ezell 1974:personal communication). The culture of the San Dieguito people has been divided into three relatively distinct phases representing assumed variations in time and space. Within these three phases exists various "industries" that are geographically and ecologically based; these are not of specific concern in this analysis. San Dieguito I, the oldest of the known Paleo-Indians in San Diego County, inhabited the desert regions east of the Cuyamaca/Laguna mountain ranges as long ago as 21,000 years (Childers 1974; Ezell 1974:personal communication).

In general, the ancient hunters of the San Dieguito I phase apparently left little or no permanent record on the land, except for their scattered lithic tools, waste stone debris and two recently discovered burials in the Yuha Basin-Truckhaven area (Rogers 1939:25-31; Ezell 1974:personal communication; Childers 1974; Wallace 1955:189-191). Broad characteristics of the San Dieguito I people include their manufacture and use of crudely formed stone flakes, blades and scrapers.

San Dieguito II is found both in the desert and throughout western San Diego County. Lithic artifacts represented by this phase include more finely worked blades, somewhat smaller

and lighter points, and a larger variety of scrapers and choppers. In general, however, the same morphological types remain basically unchanged from the earlier phase. Like their predecessors, these people were medium-to-large-game hunters, although foraging must have served to supplement their diet (Warren 1961:262; Moriarty 1969:1-18), perhaps to a greater extent than most scholars have implied.

The terminal San Dieguito phase, San Dieguito III, represents a morphological and typological change, as indicated by an altered technology. The tool types become far more varied both in style and in functional design, thus indicating a change in the culturally determined mental templates. Such alteration in technological form can be attributed to environmental adaptation and/or a technological "snowball" effect, wherein technological advances and changes thrive and feed on themselves and progressively create a new technological mode.

As a result of such technological changes, the tools of the San Dieguito III phase exhibit not only a wider variety of tool types, but also a fundamental refinement in tool manufacture. A primary difference in tool technology is represented by the introduction of pressure-flaked blades and points. Unlike simple percussion flaking, pressure flaking requires a more delicate touch and more finely conceived mental template. The resulting tools exhibit form, complexity and balance not found in the early phases of the San Dieguito people.

Other diagnostic traits associated with San Dieguito III include planes, choppers, plano-convex scrapers, crescentic stones, elongated bifacial knives, and intricate leaf-shaped projectile points (Rogers 1939:28-31). Beyond specific tool types and the introduction of pressure flaking, there exists no absolute method of discerning between San Dieguito II and III. Patination, a weathering process involving chemical change on the surface of stones, is a relative guide to antiquity and provides gross distinctions between the San Dieguito phases; however, its use is limited by the many variables which are involved in its application.

3.1.2 La Jollan-Pauma

By about 7,000 years ago, a new group of peoples had begun to inhabit and exploit the coastal and inland regions of San Diego County (Moriarty 1969:12-13). These people, the La Jollans, were nomadic exploiters of maritime resources (Harding 1951; Moriarty *et al.* 1959:185-216; Wallace 1960:277-306), who also relied on seed gathering and vegetal processing. The La Jollans may have been entering into the mortar and pestle phase late in the terminal stage of the La Jollan-Pauma transitional period (Warren 1961). The tool types of the La Jollans indicate that these members of what Wallace (1955) terms Early Milling Horizon possessed a far greater reliance on the sea and foraging than their predecessors, the San Dieguito people, although Kaldenberg and Ezell (1974) have excavated at least one San Dieguito site, W-49, which contained a well-defined shell midden. The variety and quality of lithic tool

manufacture is much more basic and unrefined when compared with even the basal phase of the San Dieguito complex.

Characteristic traits of the La Jollan culture include fire hearths, shell middens, flexed inhumation, grinding implements, and absence of ceramics. The archetype La Jollan sites are located along the coast near bay or lagoon areas. In recent years, inland La Jollan sites of a seemingly later period have been discovered in transverse valleys and sheltered canyons, including Valley Center (True 1959:225-263; Warren *et al.* 1961:1-108; Meighan 1954:215-227). These non-coastal sites have led to a new name for La Jollan-type sites with an inland location. True (1959), Warren (1961) and Meighan (1954) had applied the term Pauma Complex to certain inland sites which possess a predominance of grinding implements (especially manos and metates), lack of shell, greater tool variety, more sedentary life patterns than expressed by San Dieguito sites, and an increased dependence upon gathering. However, it is more probable that these inland sites represent a non-coastal manifestation of Early Milling peoples who adopted or developed a hunting mode more so than their coastal brethren. Wallace (1955:214-230) denotes this late transitional phase as Intermediate, and establishes its position between Early Milling Horizon and Late Milling Horizon.

3.1.3 Kumeyaay/Northern Diegueno - Luiseno

By 2,000 years ago, Yuman-speaking peoples sharing cultural elements had occupied the Gila/Colorado River drainage (Moriarty 1966). Through gradual westward migration the Yumans

drifted into Imperial and San Diego Counties, where they came into contact and apparently acculturated with the remnants of the Early Milling La Jollan cultural tradition (Moriarty 1966; 1965). Because of basic similarities in the late La Jollan/early Yuman patterns, it is difficult to clearly define the contact period or point between La Jollan/Yuman.

Dr. James R. Moriarty (1965; 1966) has suggested that there existed a pre-ceramic Yuman phase, as evidenced from his work at the Spindrift Site in La Jolla. Based on a limited number of radiometric samples, Moriarty has concluded that a pre-pottery Yuman phase occupied the San Diego coast 2,000 years ago and that by 1,200 years ago ceramics had diffused from the eastern deserts.

Although some researchers still follow Malcolm Rogers' belief that Yuman peoples first appeared in San Diego County only 1,000 years ago (Rogers 1945), there is a growing body of data supporting Moriarty's hypothesis. A recent excavation of a La Jollan/Kumeyaay site in Sorrento Valley (Carrico 1975) encountered a cultural stratification with a basal date of 3,755 years ago and a terminal date of 2,525 years ago. It is worth noting that the upper stratum (0-10 centimeters) of the dated column contained ceramics and projectile points commonly considered time-markers indicative of Late Milling Kumeyaay. Radiometric dating of a large shell sample from this stratum produced a date of $2,525 \pm 70$ years B.P. The near absence of ceramics and total lack of projectile points below the 10-centimeter level, within a series of strata that contained a variety of seemingly early cultural material dated at $2,925 \pm 70$ B.P. (30-40 centimeters) and $3,755 \pm 75$ B.P.

(50-60 centimeters) may indicate that the Rimbach Site is a multi-component, culturally stratified site containing a transition between La Jollan and Yuman circa 2,500 years ago.

Whether the Yuman peoples moved into the area 2,500, 2,000, or 1,500 years ago, they brought with them a culture heavily influenced by their Yuman neighbors in the eastern desert region of California and along the Colorado River. These prehistoric/protohistoric peoples possessed ceramics, operated a closely knit clan system, utilized a highly developed grinding technology, had elaborate and extremely complex kinship patterns, created rock art, and carried on extensive trade with the surrounding cultural areas (Rogers 1945:167-198; Kroeber 1970:709-725; Strong 1929). It has also been postulated that the Kumeyaay and their northern neighbors, the Luiseno, may have been practicing a basic type of protoagriculture prior to Hispanic contact (Lewis 1973; Shipek 1974:personal communication; Treganza 1947).

About 1,000 to 1,500 years ago, a group of Shoshonean-speaking people migrated out of the Great Basin region and intruded like a wedge into southern California. This wedge separated the Yuman groups and was eventually to cause great cultural variations (Kroeber 1970:278; True 1966). In coastal San Diego County, this group of Shoshonean intruders has been labeled the San Luis Rey I and II Complex (Meighan 1954:215-227). When the early Hispanic explorers contacted these people, they called them Luisenos, after the Mission San Luis Rey de Francia founded in the heart of Luiseno (San Luis Rey II) territory.

Although of a different linguistic stock, the Luiseno and the Kumeyaay (Diegueno, after San Diego) shared many cultural traits. D.L. True (1966) has suggested that basic similarities in ecological exploitation, environmental setting and temporal placement forced the late-coming and highly nomadic Shoshoneans to adapt to a life style and cultural pattern that was established and functioning upon their arrival. D.L. True outlines certain attributes or traits which he finds as dissimilar between the two cultures. He notes that Luiseno projectile points are more basic than those of the Kumeyaay; those of the Luiseno are predominantly made of quartz. He also notes that ceramics were evidently a late development of the Luiseno; they probably learned the use of pottery from the Northern Diegueno. True also postulates the Luiseno possessed a very small, very closed trade network; that in general they were not as world-aware as the Kumeyaay, although Luiseno cosmology and religion seem better developed.

3.1.4 Protohistoric Period

The Hispanic intrusion (1769-1822) into native-American southern California affected the coastal tribes and peoples living in well-traveled river valleys. The Mexican Period (1822-1848) saw continued displacement of the native population by expansion of the land grant program and development of extensive ranchos. The Gold Rush and the concomitant granting of statehood, combined with an influx of aggressive, land-hungry Anglos, caused a rapid displacement of the natives, as well as deterioration of their culture and life-ways (Shipek 1974; Bancroft 1886; Kroeber 1970).

The literature on these later peoples, the Kumeyaay, Luiseno, Cahuilla, Cupeño and others, is rather extensive and includes Barrows (1900), Bean and Saubel (1972), Caughey (1952), Gifford (1918), Hayes (1929), True (1970), Heizer and Whipple (1957), Hooper (1920), Kroeber (1970), Cuero (1968), Sparkman (1908:87-234), and Strong (1929).

4.0 INVESTIGATION TECHNIQUES

4.1 INTRODUCTION

Based on the previous survey report for the proposed Telegraph flood control project, no cultural resources were known or suspected to exist within the project area (Leach 1975a:19-22). However, that document strongly suggested the possibility of unsuspected buried cultural resources (Leach 1975a:23, 25), and this could not be overlooked by the Corps of Engineers (Martz 1978: Personal Communication). The legal mandates compelling vigorous cultural resource management on the part of the Corps include the National Environmental Policy Act (Public Law 91-190), Archaeological and Historical Preservation Act (Public Law 93-291), and Executive Order 11593 (36 F.R. 8921).

Fulfillment of the mandates mentioned above, and the accurate timing of development schedules for the proposed project required that at least minimal subsurface testing be undertaken to assess buried deposits along specific portions of the channeled creekbed (see Figure 2). Direction as to the method (e.g. backhoe trenching) and amount of subsurface excavation was provided by Department of the Army, Corps of Engineers, Los Angeles District Environmental Planning Section (Martz 1978: Personal Communication).

Testing procedures employed during this phase of investigation were varied. Four trenches were mechanically excavated (employing a backhoe and operator), barricaded, and backfilled. Soil profiles were measured and drawn to scale, and soil samples were retrieved from each strata identified. Accurate instrument locations for each trench relative to known control monuments were also recorded. The following subsections detail the various testing procedures briefly discussed above.

4.2 TEST TRENCHING

The highly technical nature of land use along those portions of Telegraph Canyon Creek scheduled for test excavations required the collaboration of informed representatives from the Corps of Engineers, San Diego Gas & Electric Company, and WESTEC Services, Inc. to determine the optimal locations for trenching. Several areas in the immediate vicinity were known to contain subsurface cables used to control SDG&E's power network, and required avoidance. Additional hazards included high pressure subsurface gas and petroleum pipelines, low voltage subsurface cables, etc. After careful consideration, four test areas were picked where it was determined that no hazardous subsurface improvements would be encountered.

WESTEC Services, Inc. contracted with Burgess Dean Trenching and Backhoe Service for the trench excavations. Employing a Case 580B backhoe with an 18-inch bucket, operator Eddie Caplenger performed the trenching and backfill services.

Trenches were excavated in approximate 6 foot (1.8 meter) levels, requiring (in most instances) two passes over the trench to reach the appropriate depths. Initially, it was intended that all of the

backfill from the trenching operations be passed through one-eighth-inch mesh hardware cloth and scrutinized for cultural remains. This procedure was found unfeasible due to the clay content in all but the top five centimeters of topsoil for any of the trenches excavated. Instead, the screening of subsurface soils was continued on a lesser scale, allowing detailed inspection of sample deposits for each of the strata encountered. At all times the trenching was under close scrutiny for the recovery of suspected artifacts, or the disturbance of identifiable cultural lenses (strata).

4.3 SOIL PROFILES

Scaled profile maps of a single sidewall for each trench were prepared immediately after trenching. Measuring north to south, each trench was "ticked" at 50 centimeter increments, and along these stations measurements for the bottom of the trench and each strata above that were recorded. This process was continued until a sidewall profile was completed for each trench, documenting the soil strata, observed concentrations, and historic disturbance.

4.4 SOIL SAMPLES

Two series of soil samples were gathered from the test trench investigations. On the lowest order, soil samples were gathered from strata containing mollusk remains, or other observable materials to facilitate more accurate analyses. Soil samples were also collected for the Corps; these being samples (in excess of one pound) taken from each identifiable stratum in each of the four test trenches. These samples were sent (without prior analysis) to the Corps of Engineers, Los Angeles District Headquarters.

4.5 ACCURATE INSTRUMENT LOCATIONS

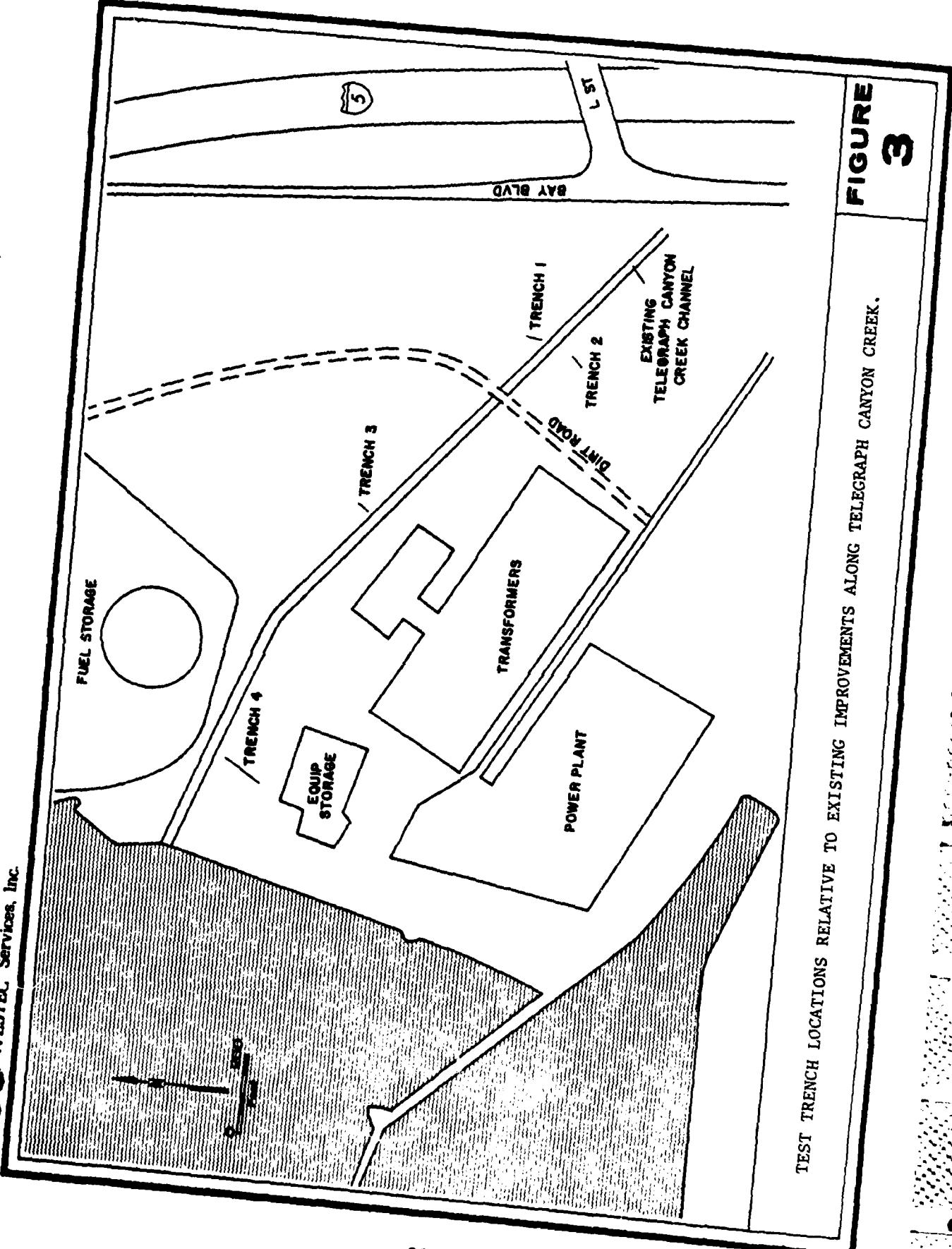
To provide concise information with regard to the location of test trenches, it was determined that an accurate instrument survey be made. Using a control monument (horizontal Control Second Order or better; vertical control Third Order) as primary datum, shots were taken of the northerly and southerly points of each test trench. These data were recorded on survey data forms for later translation to scaled contour maps (scale:1:2400).

5.0 SUMMARY OF TEST RESULTS

Results of test trenching along the westernmost 1,800 feet (approximate) of Telegraph Canyon Creek were negative. No historic or prehistoric cultural resources were encountered in any of the four trenches excavated. Standardized scale profile maps are provided throughout the following discussion, and the locations of all test trenches may be seen in Figure 3). A photo record of trenching exercises and a geological report on the nature of observed subsurface strata are attached at the end of this report (Attachments A and B, respectively) to aid in the interpretation of test results.

- Trench 1

As shown in Figure 4, Trench 1 consisted of five visible strata, the last of which was groundwater encountered at 2.6 meters (8.53 feet) deep. From surface to bottom, the trench revealed at least four identifiable strata. The first 10 to 25 centimeters (4 to 10 inches) exhibited a compact, dry clay with



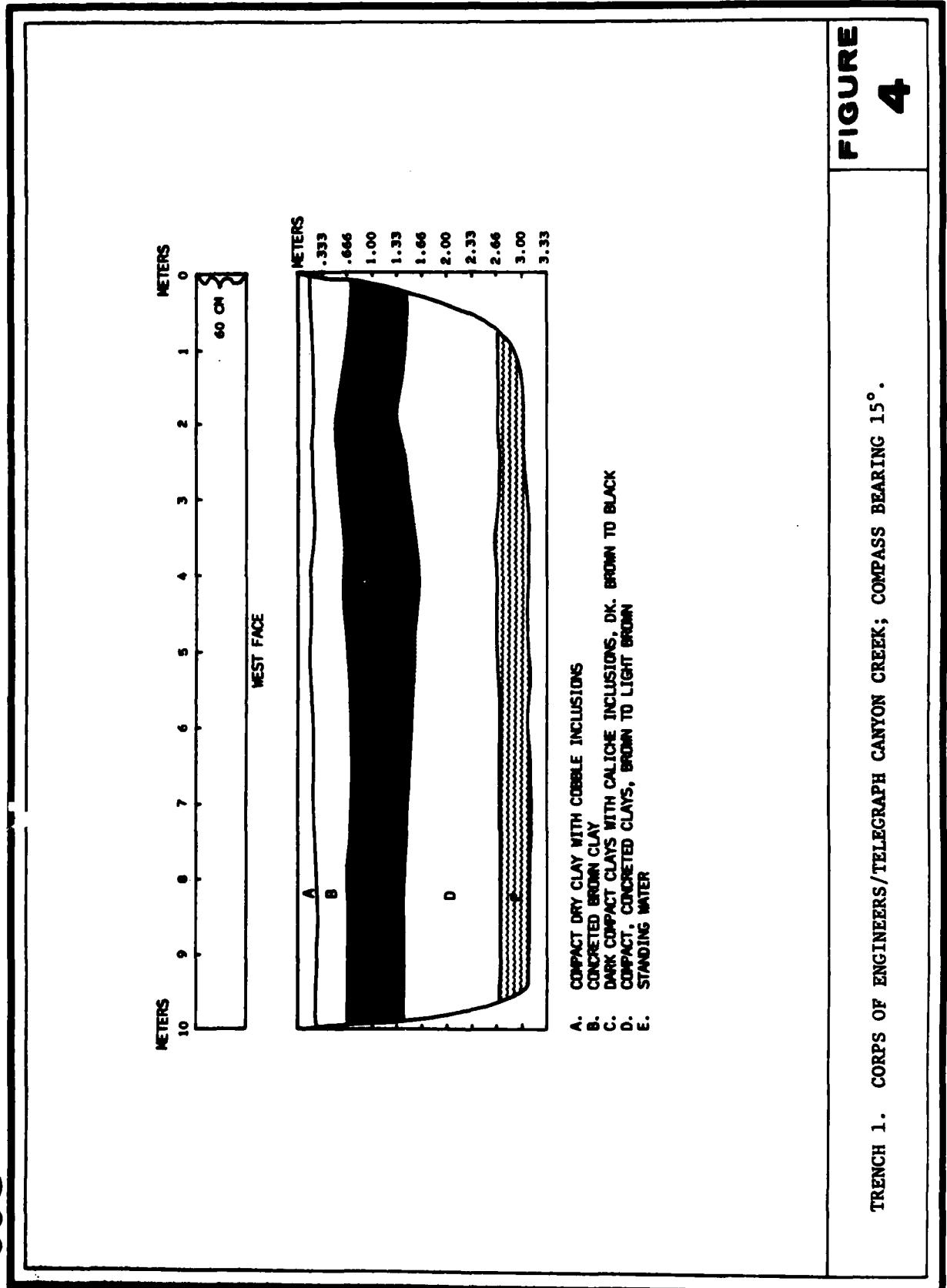
cobble inclusions (poorly sorted). To depths of some 70 centimeters (27.5 inches) concreted brown clays were noted. Below these, a rather stable layer of dark compact clays with caliche inclusions was observed (dark brown to black), extending to a depth no greater than 1.5 meters (59 inches). Below this and continuing to the trench bottom, compact, concreted clays (light brown to brown) were encountered.

The total dearth of cultural remains, coupled with the apparently stable strata suggest either a long-term, relatively static deposition of soils, or a constructed ground surface through the artificial placement of fill soils.

• Trench 2

Comprised of four visible geologic strata (Figure 5), Trench 2 was excavated to a depth of 3.4 meters (11.1) feet. Groundwater was encountered at or about 3 meters (9.8 feet) in depth. As with Trench 1, this subsurface test exhibited only negative information with regard to cultural debris: No material remains of historic or prehistoric activities were encountered.

Visible strata for Trench 2 were similar to those identified in Trench 1. A surface cover of dry, sandy clay was observed to a maximum depth of 20 centimeters (7.8 inches), overlaying a generally stable sand lens occurring to a depth of 50 centimeters (1.5 feet). Limited amounts of shellfish remains were observed in this sand lens, and were also noted (more numerously) in an intrusive deposit of sands, gravel and shellfish





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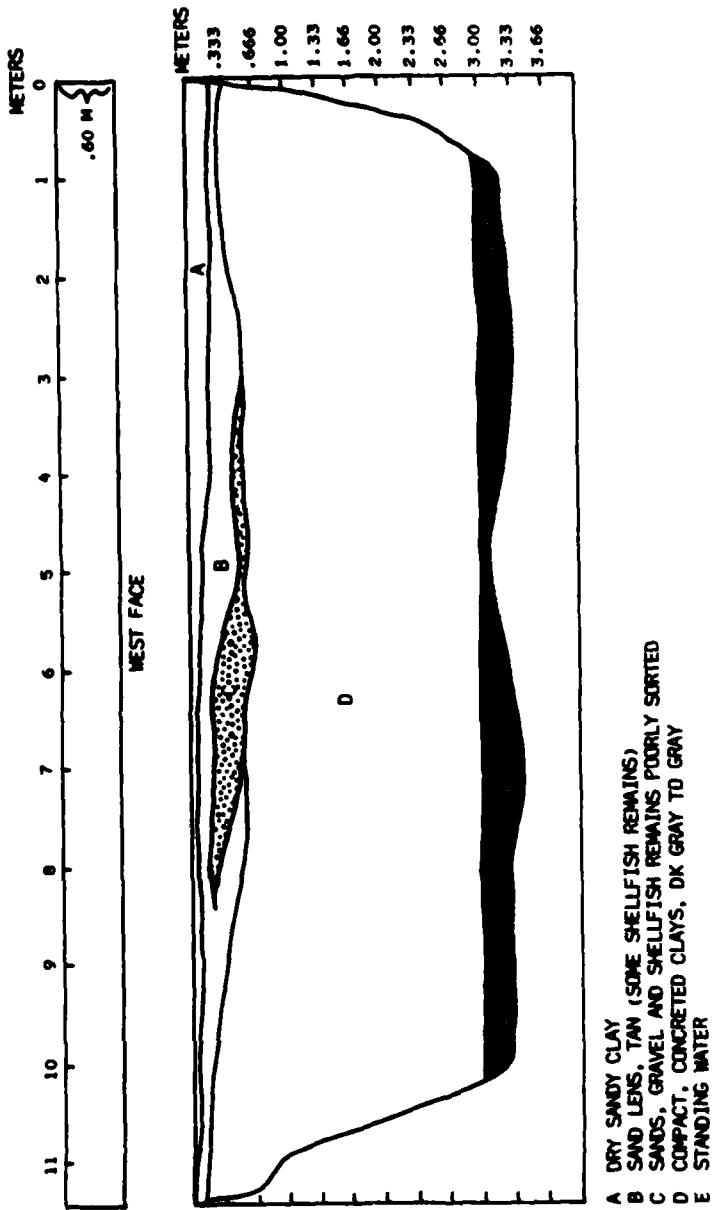


FIGURE
5

TRENCH 2. CORPS OF ENGINEERS/TELEGRAPH CANYON CREEK; COMPASS BEARING 40°.

remains (poorly sorted) as shown in Figure 5. Underlying all of the above was a strata of compact, concreted clays (dark gray to gray).

- Trench 3

Observation of sidewall profiles in this test trench provided the most complex stratigraphy noted during the course of the current investigation. A total of seven strata were observed, excluding the recent subsurface sewer easement (as shown in Figure 6) and the occurrence of standing water at a depth of 3.1 meters (10.1 feet). Surface soils were primarily dry, sandy clays to an approximate 15 centimeters (6 inches), followed by concreted clays with limited shellfish remains to depths ranging from 20 to 50 centimeters (7.8 to 19.6 inches). Between these and the lowest strata occurring from 1 meter to 3.5 meters, four additional lenses were recorded. These are severely unstable (i.e. mixed) strata of sands, shellfish remains, and marbled sands and dark gray clays (Figure 6).

No prehistoric or historic cultural resources were noted in any portion of Trench 3. As discussed in Attachment B of this report, the strata suggests that the surface soils in this region were constructed of introduced fills overlaying tidal marsh lands.

- Trench 4

As with the previous three trenches discussed, Trench 4 exhibited an absence of prehistoric or historic cultural debris.

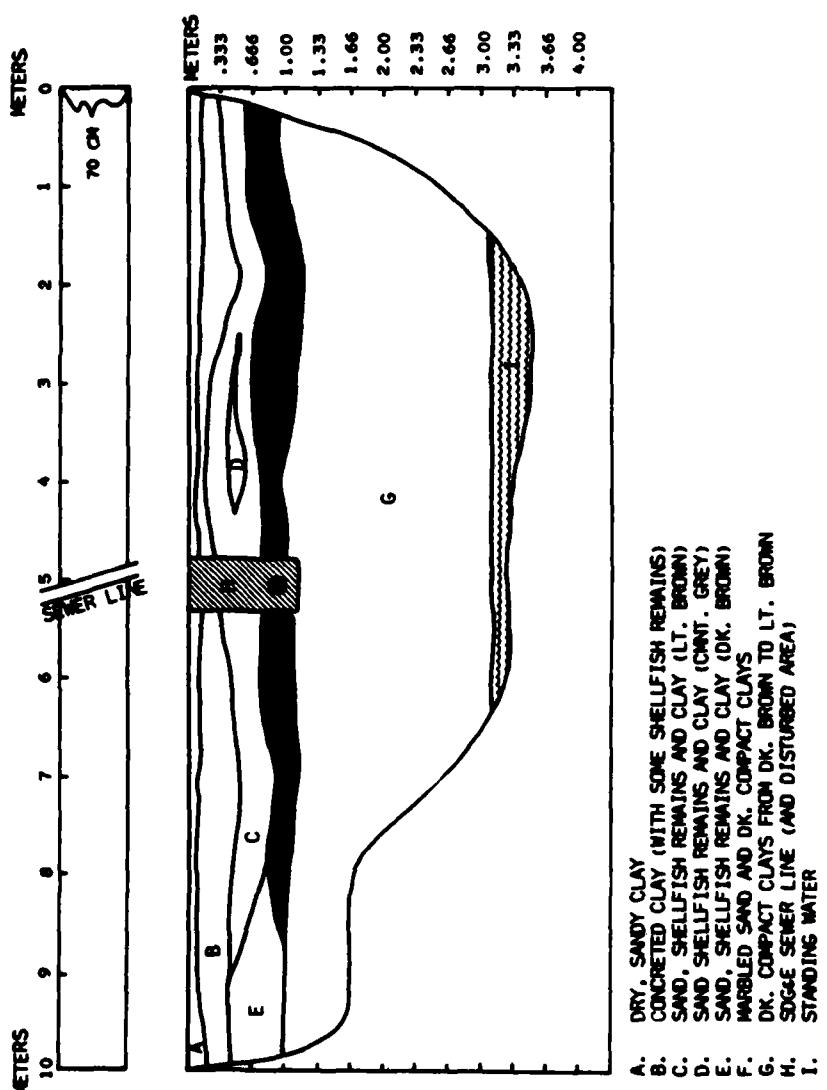


FIGURE
6

TRENCH 3. CORPS OF ENGINEERS/TELEGRAPH CANYON CREEK; COMPASS BEARING 40°.

No evidence of past human activities was observed, and geologic analysis (Attachment B) strongly suggests that this area was salt marsh prior to landfill operations.

Excavated to a depth of 2.3 meters (7.5 feet), groundwater (encountered at 1.8 meters) precluded visible examination beyond this depth. Stratigraphically, the trench exhibited a total of five strata ranging from compact clays with cobble and shellfish inclusions to a crystalline lens first noted between 1.3 and 1.6 meters (4.2 to 5.2 feet) deep (Figure 7). These strata are geologically described in Attachment B of this report.

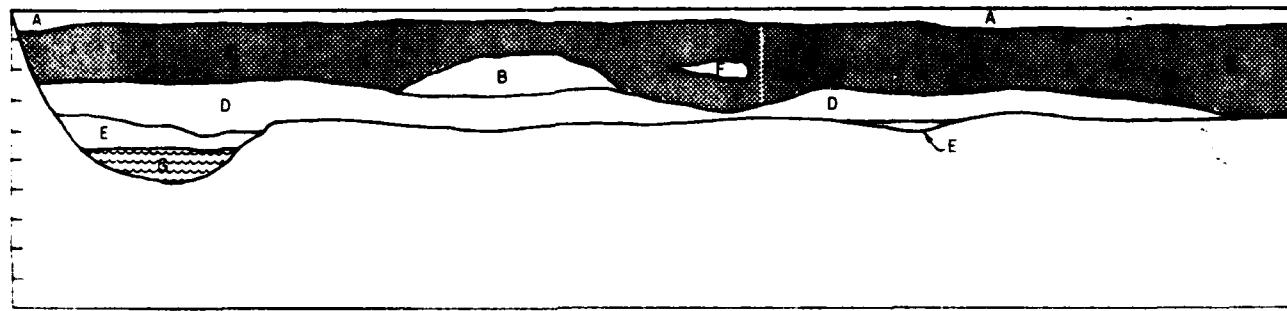
6.0 ANALYSIS OF TEST RESULTS

Because the test trench excavations produced no cultural debris in either the backfill or sidewall profiles, it may be suggested that no subsurface cultural resources are to be found along that portion of Telegraph Canyon Creek west of Interstate 5 and east of San Diego Bay. In support of this hypothesis are the findings of previous research (Leach 1975a:20) and geologic interpretation of the current test trench excavations (see Attachment B).

7.0 POTENTIAL ADVERSE IMPACTS

The potential for adverse impacts to known or suspected cultural resources was well documented in the previous environmental impact report prepared in conjunction with the proposed Telegraph Canyon flood control project (Leach 1975a:25-27). With regard to unsuspected, buried subsurface deposits, test trenching along the western reaches of Telegraph Canyon Creek was conducted

30 29 28 27 26 25 24 23 22 21 20 19 18 17 16



- A. COMPACT GREY CLAY WITH COBBLES & SHELLFISH REMAINS
- B. DK. COMPACT CLAY
- C. SAND MARBELED DK. CLAY
- D. SAND LENS
- E. CRYSTALINE LENS
- F. SAND AND SHELL POCKET
- G. STANDING WATER

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2

18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3

WEST FACE



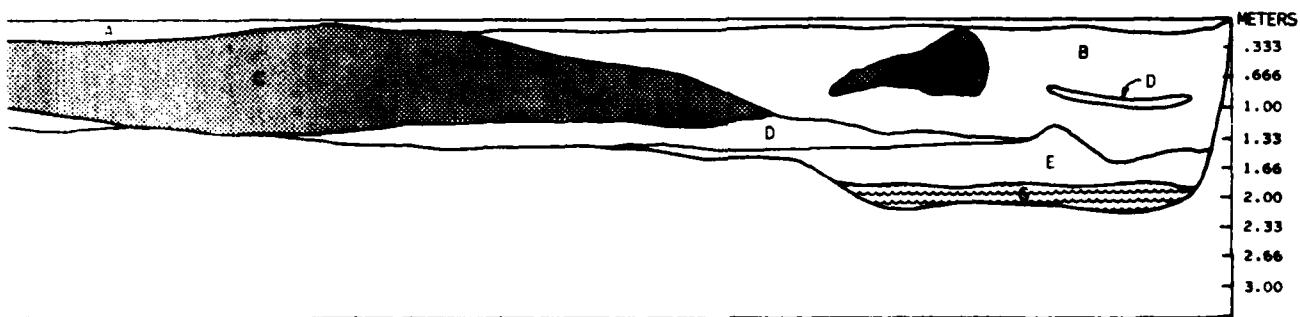
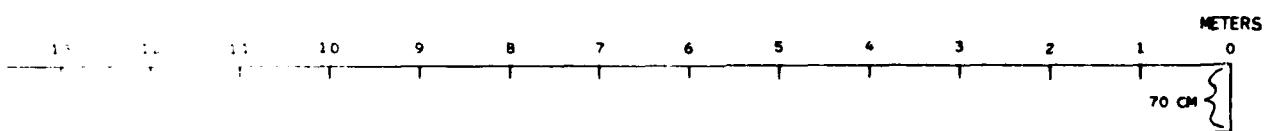
WESTEC Services, Inc.



TRENCH 4 Corps of Engineers/Telegraph Canyon Creek
compass bearing 20°

2

2



TRENCH 4 Corps of Engineers/Telegraph Canyon Creek;
compass bearing 20°

FIGURE
7

3

with negative results. No subsurface cultural deposits were either exhumed in the trenching process nor noted in the trench sidewalls for any of the trenches excavated (discussed in detail in Sections 5.0 and 6.0 of this report).

The remaining potential for adverse impacts to unsuspected, buried subsurface cultural deposits is slight. Analysis of the strata profiles and soil samples substantiates the probability that this acreage subjected to archaeological investigation has been constructed of land fill overlying natural tidal marshlands. However, the nature of the limited testing procedures precludes any absolute determination with regard to the lack of subsurface cultural strata along the untested portions of channeled creek-bed.

8.0 RECOMMENDED MITIGATING MEASURES

As no adverse impacts to cultural resources (surface or subsurface) are expected, no measures to mitigate identified impacts need be recommended. In the event that unsuspected cultural resources are encountered during the course of project construction, a qualified archaeologist should be consulted to evaluate the remains. Such evaluation may require that project construction be halted along that portion of the project and not resume until such time as adequate measures have been taken to ensure the mitigation of any identifiably adverse impacts.

On the basis of previous cultural resource surveys (Leach 1975a) and the current subsurface investigations, it is expected that no cultural resources (e.g. historic or prehistoric sites) will be impacted by the proposed Telegraph Canyon flood control project.

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Attachment A
PHOTO RECORD

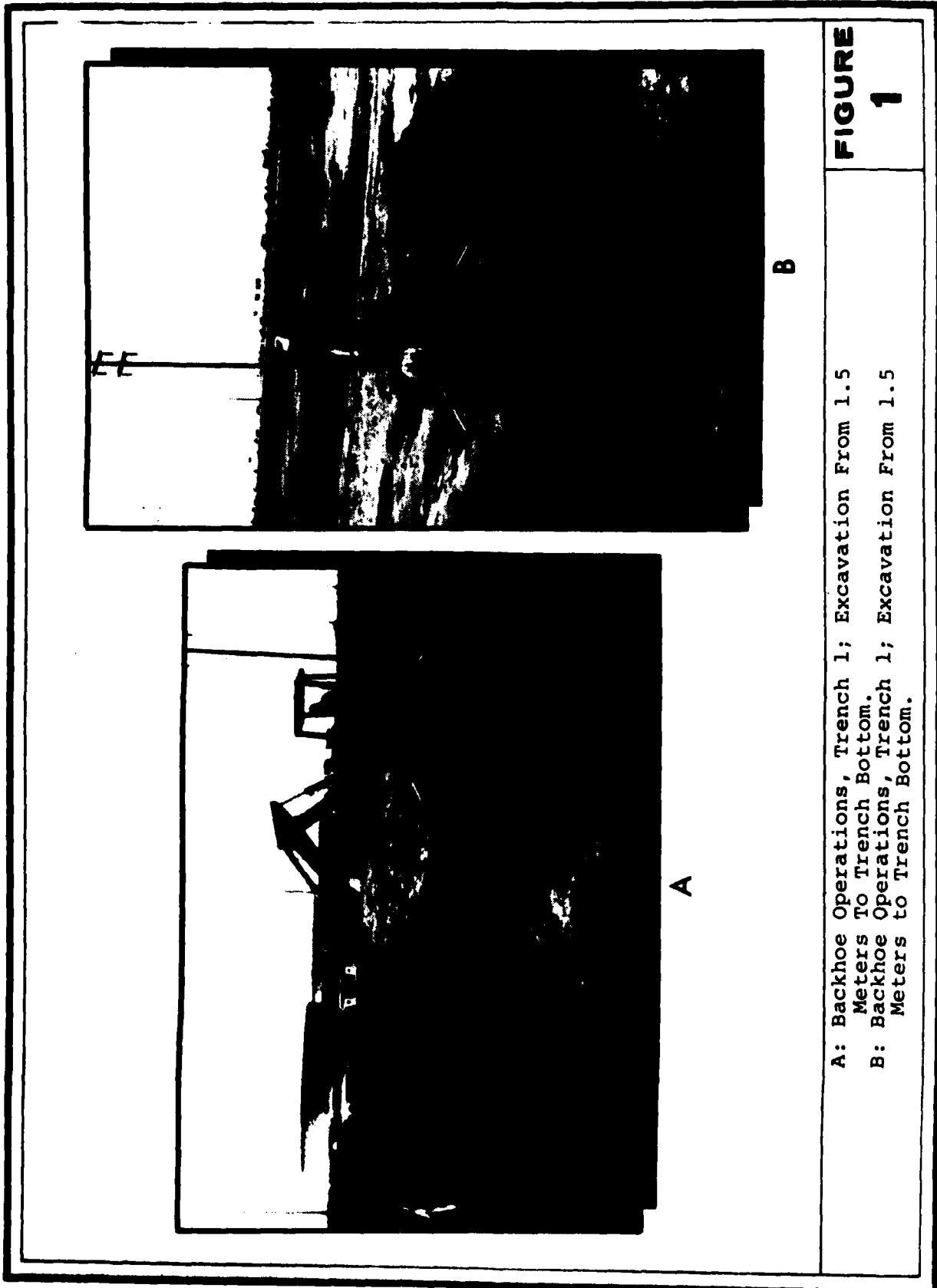


FIGURE
1

A: Backhoe Operations, Trench 1; Excavation From 1.5 Meters To Trench Bottom.
B: Backhoe Operations, Trench 1; Excavation From 1.5 Meters to Trench Bottom.



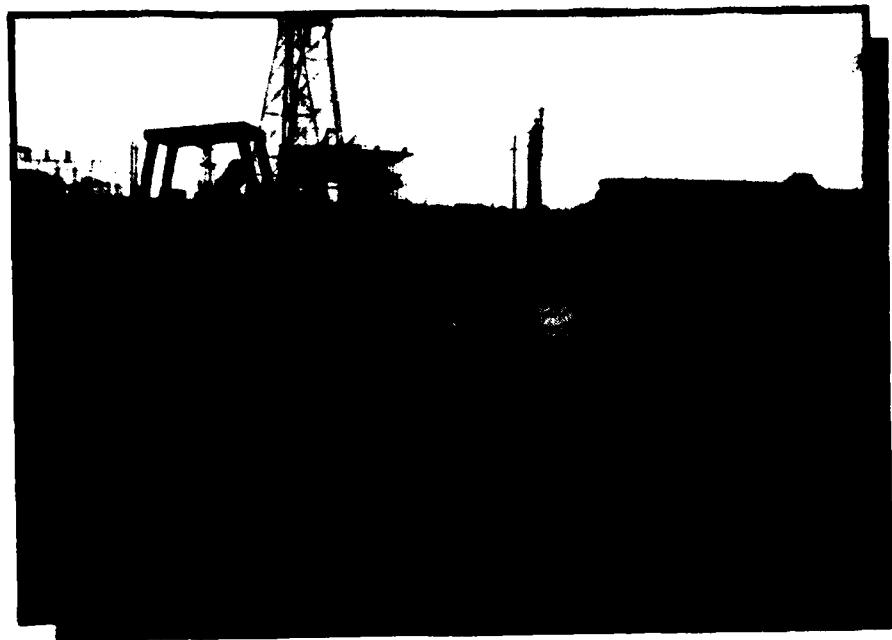
B



A

A: Trench 1 Operations; Trench Depth 3.1 Meters (10.17 Feet).
B: Backhoe Operations; Trench 1; Completed Trench.

FIGURE
2

**A****B**

A: Backhoe Operations, Trench 2; Surface To 1.5 Meters Deep.
B: Backhoe Operations, Trench 2; 1.5 Meters to Trench Bottom.

**FIGURE
3**



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A

Backhoe Operations, Trench 2; General View.

**FIGURE
4**



A



B

FIGURE 5

A: Backhoe Operations, Trench 3; General View of Trench and Exposed Sewer Line.
B: Backhoe Operations, Trench 3; Soil Sampling Operations and Preparation For Sidewall Profiles.



A

B

FIGURE 6

A: Backhoe Operations, Trench 4; Commencement of Trenching
(Surface To Trench Bottom)
B: Backhoe Operations, Trench 4; Completion of Trenching
(Surface To Trench Bottom).

Attachment B

**A GEOLOGIC EXAMINATION OF TEST TRENCH
EXCAVATIONS AT TELEGRAPH CANYON,
CHULA VISTA, CALIFORNIA**

Examination of backhoe trenches was conducted in order to determine probable depositional environments of the strata encountered. Measured sections in all four trenches were covered by .5 to .7 meters of a massive yellowish fine to medium sand which contained variable proportions of gravel dispersed throughout and is typically characterized by whole Turitella shells and fragmented mollusk shell remains. This surficial material represents what is shown by Kennedy and Tan (1977) as quaternary alluvium and slopewash and as artificial fill. Older maps (Ellis and Lee, 1919; Plate VI) are on a topographic base which shows this area as marshes and tidal flats. This topographic base was surveyed in 1902. The only plausible conclusion is that this material represents an historic fill.

Sediments exposed in trenches beneath the artificially emplaced surficial covering represent deposits formed in the marshes and beaches shown on the older maps. Massive muds and muddy fine sands exposed in Trenches 1, 2 and 4 represent lagoonal deposits, whereas laminated fine to medium sands in Trenches 3 and 4 represent beach deposits. More precise paleoenvironmental interpretations could be made by conducting pollen analysis on some of the organic rich clayey laminae.

Evidence that the entire area changed local environments drastically from time to time is provided in Trench 4 where a .15 meter thick layer of selenite crystals were encountered. This layer is underlain by lagoon muds and is overlain by beach sands.

This selenite could only have formed in a closed evaporating basin which was periodically flushed with fresh sea water providing a source for the calcium sulfate but preventing the sodium chloride from concentrating and precipitating. The presence of laminated sands above the selenite suggests that this deposit may represent a natural occurrence as opposed to the buried remains of a previous salt evaporating pond such as may have accompanied the La Punta salt works around 1900 or the works of the Western Salt Company since 1869 (Weber, 1963):

TEST PIT LOG

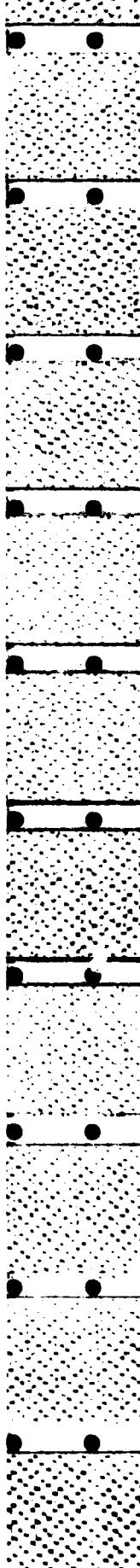
DATE 14 Sept 78
 CLIENT _____
 SITE LOCATION _____
 TEST LOCATION Trench 1

SHEET 1 OF 1
 W. O. 3547

FIELD ENGR. _____

M DEPTH	MATERIAL DESCRIPTION	SAMPLES TAKEN		
		TYPE	DRY DENSITY	MOISTURE CONTENT
.65	Moderate yellowish brown massive pebble to cobble bearing, carbonate speckled silty fine sand.	.65	Bulk 1-1	
1	Dusky yellowish brown massive carbonate mottled silty fine sand.	.95	1-2	
1.6	Dark yellowish brown massive carbonate mottled silt and clay bearing fine sand. Occasional charcoal fragments.			
2				
2.8				
3	Bottom of Trench			
4				

B-3



TEST PIT LOG

DATE 14 Sept 78

CLIENT

SITE LOCATION

TEST LOCATION Trench 2SHEET 0 OF 1
W.O. 3547FIELD ENGR.

# DEPTH	MATERIAL DESCRIPTION	SAMPLES TAKEN		
		TYPE	DRY DENSITY	MOISTURE CONTENT
.5	Dusky yellow massive mollusk and gastropod, granule to pebble bearing silty medium sand. Contains mud balls and bone fragments.	.5	Bulk 2-1	
1.1	Olive black massive granule bearing silty muddy fine sand.	1.1	2-2	
1.6				
2	Dark yellowish brown massive coarse sand bearing fine sand.	1.7	2-3	
2.8				
3	Groundwater Level			
4	Bottom of Trench			

B-4

TEST PIT LOG

DATE 14 Sept 78

CLIENT

SITE LOCATION

TEST LOCATION

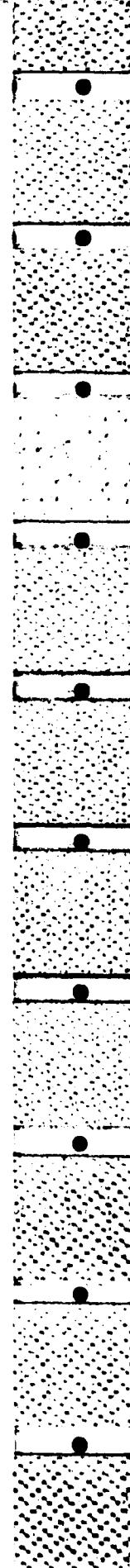
SHEET 0 OF 0

W. O. 3547

FIELD ENGR.

M DEPTH	MATERIAL DESCRIPTION	SAMPLES TAKEN		
		TYPE	DRY DENSITY	MOISTURE CONTENT
	Moderate yellowish brown massive, unconsolidated pebble to cobble bearing medium sand. Contains rare gypsum crystal and "chunks" of powdery calcium carbonate.	.7	3-0 3-1	
.7	Laminated dark greenish gray (weathering dark yellowish brown) and dark gray to black fine sand. Contains interbeds of organic rich clay.	1.1	3-2 Bulk	
1.8		1.6	3-3	
2	Very thick bedded grayish brown coarse sand to granule bearing muddy very fine sand. Contains an occasional calcium carbonate spec.	1.6	3-4	
2.9				
3	Groundwater Level			
3.4	Bottom of Trench			

B-5



TEST PIT LOG

DATE 14 Sept 78

CLIENT

SITE LOCATION

Trench 4

SHEET OF
W. O. 3547

FIELD ENGR

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